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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,093	11/18/2003	Michael C. Tulkoff	VIGN1660-1	4856

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SPRINKLE IP LAW GROUP  
1301 W. 25TH STREET  
SUITE 408  
AUSTIN, TX 78705

EXAMINER

SAEED, USMAAN

ART UNIT PAPER NUMBER

2166

DATE MAILED: 09/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/716,093	<b>Applicant(s)</b> TULKOFF ET AL.	
	<b>Examiner</b> Usmaan Saeed	<b>Art Unit</b> 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 49-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 49-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Receipt of Applicant's Amendment, filed on 6/26/2006 is acknowledged.  
Claims 1-48 have been cancelled. Claim 49 has been amended. Claims 50-60 have been newly added.

### ***Claim Objections***

2. Examiner has withdrawn the claim objections for claims 8-9, 20-21, 32-33, and 44-45 due to the cancellation of the claims.

### ***Drawings***

3. The amended specification was received on 6/26/2006 and is acceptable to overcome the drawing rejections.

### ***Claim Rejections - 35 USC § 101***

4. The cancellation of claims 1-48 and amendments to claim 49 are acceptable to overcome the 101 rejections.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 49-52 and 56-59 are rejected under 35 U.S.C. 102(e) as being anticipated by **Macleod et al.** (**Macleod** hereinafter) (US PG Pub No. 2003/0105770).

With respect to claim 49, **Macleod** teaches **a method for integrating data into a content management system, comprising:**

**“generating a set of content types based on a set of data”** as a content class models a set of items that have similar properties and fulfill similar purposes. A content class defines the purpose or content of an item by containing as its elements a list of properties appropriate for that purpose or content (**Macleod** Paragraph 0022).

**“saving the set of content types in a memory”** Schema definition require that objects conform to fixed data formats of classes defined in the directory schema. In other words, for example, if a class consists of ten (10) data elements, then any object

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that is based on that class will require the data storage to store those 10 data elements, regardless of whether each of the 10 elements even contain any data (**Macleod** Paragraph 0055).

**“generating a set of content type objects corresponding to the set of content types”** as a content class models a set of items that have similar properties and fulfill similar purposes. A content class defines the purpose or content of an item by containing as its elements a list of properties appropriate for that purpose or content (**Macleod** Paragraph 0022). Schema definition require that objects conform to fixed data formats of classes defined in the directory schema. In other words, for example, if a class consists of ten (10) data elements, then any object that is based on that class will require the data storage to store those 10 data elements, regardless of whether each of the 10 elements even contain any data (**Macleod** Paragraph 0055).

**“generating a content instance object for each datum that fits a content type within the set of content types”** as FIG. 6 shows an exemplary procedure 600 to change the operational or data providing nature of multiple object instances of a base content class in a directory schema independent of modifying the directory schema. At block 610, the procedure instantiates a first object instance of a flexible content class 422 (**Macleod** Paragraph 0074).

**“associating the datum with the content instance object”** as the procedure assigns a first data string (e.g., XML) to a flexible attribute 418 in the first flexible object instance (block 610), the first data string defines any combination of a first operational and a data providing nature of the first object instance. Specifically, an application that

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has instantiated or that is using the first object instance knows of the first object instance's interface and how to unpack and use the first data string (**Macleod** Paragraph 0075).

**“saving the content instance object in a memory”** as the combination of the attributeSyntax and oMSyntax properties determines the syntax of the attribute, that is, the type of data stored by instances of the attribute (**Macleod** Paragraph 0043 & 0054).

Claim 50 is same as claim 49 and is rejected for the same reasons as applied hereinabove.

With respect to claim 51, **Macleod** teaches, **“generating the content type comprises specifying attributes associated with the content type”** as a directory schema with object classes that have flexible attributes. The content class includes a flexible attribute having a data type (**Macleod** Paragraph 0012 & 0054).

With respect to claim 52, **Macleod** teaches **“for each of the set of the content types, analyzing the data to obtain a first set of the data corresponding to the content type”** as schema definition require that objects conform to fixed data formats of classes defined in the directory schema. In other words, for example, if a class consists of ten (10) data elements, then any object that is based on that class will require the data storage to store those 10 data elements, regardless of whether each of the 10 elements even contain any data (**Macleod** Paragraph 0055). The first instantiated

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object to have any combination of one or more data types (e.g., integer, real, string, floating, character, and so on), or operational properties (e.g., an operation can be defined to do just about anything imaginable such as to send an e-mail message, to report statistics, to manage a rocket launch, and so on). Whereas the flexible attribute in the second instance of the object can be assigned completely different properties that are independent of any characteristics of the data types or operations that correspond to the flexible attribute of the first instance of the object (**Macleod** Paragraph 0077).

With respect to claim 56, **Macleod** teaches “**wherein each of the set of content type objects is a structured definition of the corresponding content type**” as all directory schema 400 structural objects (other than "top") inherit properties from the class schema class 412. Structural content classes (with the exception of the "top" content class) include only those attributes that are defined by the attribute schema class 414 or those attributes defined by content classes that have been derived from the attribute schema class 414.

With respect to claim 57, **Macleod** teaches “**wherein each of the content type objects is an XML document**” as an application using an object instance that includes the flexible attribute can store, for example, an XML string on the flexible attribute property "attributeSyntax" (**Macleod** Paragraph 0054). For example, consider the first XML string or document "<a> Data </a>" (**Macleod** Paragraph 0084).

With respect to claim 58, **Macleod** teaches, “**wherein each of the set of content types have associated workflows, access controls or policies**” as a content class models a set of items that have similar properties and fulfill similar purposes. A content class defines the purpose or content of an item by containing as its elements a list of properties appropriate for that purpose or content (**Macleod** Paragraph 0022).

With respect to claim 59, **Macleod** teaches, “**managing the set of data using workflows, access controls or policies associated with each of set of content types**” as the first instantiated object to have any combination of one or more data types (e.g., integer, real, string, floating, character, and so on), or operational properties (e.g., an operation can be defined to do just about anything imaginable such as to send an e-mail message, to report statistics, to manage a rocket launch, and so on). Whereas the flexible attribute in the second instance of the object can be assigned completely different properties that are independent of any characteristics of the data types or operations that correspond to the flexible attribute of the first instance of the object (**Macleod** Paragraph 0077).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:



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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 53-55 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Macleod et al.** (US PG Pub No. 2003/0105770) as applied to claims 49-52 and 56-59 above in view of **Varadarajan Thiruvillamalai**. (**Thiruvillamalai** hereinafter) (U.S. PG Pub No. 2004/0187100).

With respect to claim 53, **Macleod** does not explicitly teach, **“analyzing the data to generate a set of keys associated with the data.”**

However, **Thiruvillamalai** discloses **“analyzing the data to generate a set of keys associated with the data”** as a request to store an element having a data type and a key, the executing storage method code stores the element in a data store

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according to the key and in association with data type information (**Thiruvillamalai Paragraph 0010**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of the cited references because **Thiruvillamalai's** teachings would have allowed **Macleod** to return an element referenced by a key, having a specified data type by acquiring a key for the set of data.

With respect to claim 54, **Macleod** teaches “**association of values with the content instance object**” as an object instance is a collection of values, or attributes that conform to the type established by the class definition (**Macleod Paragraph 0025**).

**Macleod** teaches the elements of claim 54 as noted above but does not explicitly teach “**generating values for the set of keys for each of the content instance objects.**”

However, **Thiruvillamalai** discloses “**generating values for the set of keys for each of the content instance objects**” as the get method code determines whether the data type for the requested element matches the type index stored with the element referenced by the given key. If so, the Get method returns the data of the requested element (its value) from the data store (**Thiruvillamalai Paragraph 0009**). The Put method maintains a type index in association with each element (object) stored in the data store. The Get method validates that the type of object that was requested in the call to the Get method matches the object type that was stored in the Put method (**Thiruvillamalai Paragraph 0007**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of the cited references because **Thiruvillamalai's** teachings would have allowed **Macleod** to return an element referenced by a key, having a specified data type by acquiring a key for the set of data.

With respect to claim 55 **Macleod** teaches “**querying the content repository**” as allocated object elements in a database that are unused may become problematic and contribute to wasted data storage space and in some cases, decreased database query response times (**Macleod** Paragraph 0055).

**Macleod** teaches the elements of claim 55 as noted above but does not explicitly disclose, “**acquiring the values.**”

However, **Thiruvillamalai** discloses, “**acquiring the values**” as the get method code determines whether the data type for the requested element matches the type index stored with the element referenced by the given key. If so, the Get method returns the data of the requested element (its value) from the data store (**Thiruvillamalai** Paragraph 0009). The Put method maintains a type index in association with each element (object) stored in the data store. The Get method validates that the type of object that was requested in the call to the Get method matches the object type that was stored in the Put method (**Thiruvillamalai** Paragraph 0007).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of the cited references because

**Thiruvillamalai's** teachings would have allowed **Macleod** to return an element referenced by a key, having a specified data type by acquiring a key for the set of data.

With respect to claim 60, **Macleod** teaches, "**wherein the content instance objects are stored at a location remote from the content repository**" as computer 730 may operate in a networked environment using logical connections to one or more remote computers, such as a remote computer 782. Remote computer 782 may include many or all of the elements and features described herein relative to computer 730 (**Macleod** Paragraph 0100).

**Macleod** teaches the elements of claim 60 as noted above but does not explicitly disclose, "**wherein the content instance objects are stored at a location remote from the content repository.**"

However, **Thiruvillamalai** discloses "**wherein the content instance objects are stored at a location remote from the content repository**" as in the present invention, the computer system 110 may comprise source machine from which data is being migrated, and the remote computer 180 may comprise the destination machine (**Thiruvillamalai** Paragraph 0025).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of the cited references because **Thiruvillamalai's** teachings would have allowed **Macleod** to provide storage of data in remote locations and to return an element referenced by a key, having a specified data type by acquiring a key for the set of data.

***Response to Arguments***

7. Applicant's arguments filed 6/26/2006 have been fully considered but they are not persuasive.

Applicant argues that **Macleod** does not disclose **a set of content types based on a set of data, as content types are defined in the specification.**

In response to the preceding arguments, Examiner respectfully submits that, **Macleod** teaches, **“a set of content types based on a set of data”** as a content class models a set of items that have similar properties and fulfill similar purposes. A content class defines the purpose or content of an item by containing as its elements a list of properties appropriate for that purpose or content (**Macleod** Paragraph 0022). Schema definition require that objects conform to fixed data formats of classes defined in the directory schema. In other words, for example, if a class consists of ten (10) data elements, then any object that is based on that class will require the data storage to store those 10 data elements, regardless of whether each of the 10 elements even contain any data (**Macleod** Paragraph 0055). Examiner interprets the content class as having a set of data for a particular type of content. The reference discloses, “that objects conform to fixed data formats of classes.” Therefore the objects/datasets conform to fixed formats of classes/content types.

Further Macleod teaches the first instantiated object to have any combination of one or more data types (e.g., integer, real, string, floating, character, and so on), or operational properties (e.g., an operation can be defined to do just about anything imaginable such as to send an e-mail message, to report statistics, to manage a rocket launch, and so on). Whereas the flexible attribute in the second instance of the object can be assigned completely different properties that are independent of any characteristics of the data types or operations that correspond to the flexible attribute of the first instance of the object (**Macleod Paragraph 0077**).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "**as content types are defined in the specification**") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usmaan Saeed whose telephone number is (571)272-4046. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571)272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Usmaan Saeed  
Patent Examiner  
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A handwritten signature in black ink, appearing to read 'L Wong', with a long, sweeping horizontal stroke extending to the right.

Leslie Wong  
Primary Examiner

US  
September 06, 2006